Coaching Feedback: How & Why to Give It

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Imagine going through a practice or game as a coach without providing your athletes with feedback. Obviously, little would be gained from performance and motivational perspectives.

There is universal agreement in the motor learning literature that feedback is a critical constituent of learning. Some motor behavior researchers have stamped feedback as being the most important variable controlling performance and learning (Bilodeau and Bilodeau, 1961). Sage (1984) states that research invariably indicates that feedback increases the rate of improvement on new tasks, enhances performance on overlearned tasks, and makes tasks more interesting.

There are varying types of feedback and it would be advantageous to take a closer look at each of them.

Intrinsic feedback provides information about the movement patterns of a performed skill. These are sensory interpretations of the performed actions - the "feeling" of limb positioning, the sight of a moving ball or opponent, the auditory cues and sounds of competition (e.g., the "crack" of bat and ball contact, a QB's cadence, crowd noise, etc.), and even the smells of grass and mud.

Extrinsic feedback (also known as augmented feedback) consists of information that is sent to the learner from some outward source. It could be the coach's voice, game tapes, the shot clock, or any other source that supplements the information already available. It is an important feedback derivation, as the coach has a certain degree of control.

Knowledge of results (KR) is a category of extrinsic feedback where verbal or mechanical information is given regarding the success of an action relative to its goal. This form of feedback is useful in situations where the performer must wait for the judges' scores -- as in gymnastics, diving, etc. -- or in sports such as archery and riflery, where it is not always possible to immediately view the results.

KR is frequently used in the laboratory setting to enable controls in the information given to subjects. Early experiments conducted to evaluate the importance of KR indicate that when a learner cannot detect his/her own performance errors through intrinsic feedback, very little learning occurs unless KR is evident. Knowledge of performance (KP) is the feedback most frequently used by coaches and teachers and it tends to focus on kinematic variants. Examples of KP include a football coach intimating to the quarterback that his shoulders were not square to the receiver when the ball was released, or a basketball coach telling his point guard that a chest pass rather than a bounce pass would have been a better decision.

Early in feedback research, scientists found that the genus and timing of feedback had an extremely influential impact on learning the desired outcome. Thorndike (1927) speaks of his empirical "law of effect," whereas an action elicited by a stimulus and followed by pleasant, or rewarding, consequences tends to be repeated when that stimulus resurfaces. Conversely, an action followed by unpleasant, or punishing, consequences tends not be repeated.

The implications of using both of these techniques, in the contexts of performance enhancement and as disciplinary measures, are readily visible.

Feedback offers three paramount functions in the learning process:

a) Reinforces the learner. Positive reinforcement (Example: "Great job with your footwork and body positioning - keep it up") gives the learner a feeling of satisfaction with his/her performance. More importantly, it instills a desire to repeat the performance in the same manner.

b) Informs the learner. Specific information regarding execution is crucial to both the current performance and task repeatability (Example: "You have too much waist bend and not enough knee bend to be able to redirect").

c) Motivates the learner. Feedback, when initiated in a constructive manner, provides incentive and motivates athletes to achieve higher performance levels (Example: "You've made tremendous improvement in your ball handling skills and I can foresee you being one of the best in the conference in that discipline). Note that there is effective use of both general and specific feedback in this process. General feedback alone -- while motivating and efficacious - can quickly lose its spark if it is used unilaterally. Specific feedback (i.e., that which points directly to performance techniques, strategies, and related components) must be evident.

Error Feedback Frequency

When the brunt of the feedback centers on correcting errors, the coach should attempt to correct the largest miscues early in the learning process. There should then be a gradual reduction in the frequency of error feedback so as not to hinder overall performance, especially that of the next trial or attempt. This is known as summary feedback, where a set of trials (or repetitions) are reviewed for critique upon their completion.

The rationale behind this technique is to allow and encourage the athlete to analyze his or her own performance and to verbalize this evaluation to the coach. Both parties will then have a better understanding of what is actually being learned in the process.

Guidelines for Conveying Productive Feedback

Be as positive as possible. If necessary, "look" for things that are being done correctly and acknowledge them.

b) Give immediate feedback, especially when pointing out correct execution. The exception to this is when the "summary feedback" approach is being implemented, and recall that this technique usually involves error correction.

c) Correct one error at a time. Attempting to correct too many errors at once can confuse the athlete and hinder performance. Frustration can carry-over to the following trial/repetition by narrowing attention and focus.

d) Give group as well as individual feedback. John Wooden used to say "Criticize the group, praise the individual." By giving group feedback at times, there is less tendency of giving the perception that you're persistently "dogging" one or two individuals.

e) Be specific. Give precise, meaningful, and useful information in an easy-to-understand format. Remember that the average person has a limited ability to acquire, store, and recall detailed data on a specific task. As often as possible, use pre-planned teaching cues - short, to-the-point words/phrases -- that carry distinct meanings and can be used while the performance is in motion (Example: While a sprinter is in the middle of a 100 meter repeat, the coach might shout "fix", which is a one word teaching cue indicating that the elbows should be positioned at 90 degrees).

As a coach, you will find that pertinent feedback not only motivates your athletes, but also underpins the outcome goal with positive reinforcement. It accomplishes this by providing information on correct and incorrect actions in skill execution. By employing these reinforcement principles, you will maximize the learning of correct choices among already acquired actions - which is a critical element of skill development.

Both positive and negative reinforcement can be applied, but if it is negative in nature, it needs to be tempered with clear, specific information about correcting the miscue.

Reinforcement

Feedback should be effectuated intermittently so as to heighten its long-term summation and with the realization that it will be gradually withdrawn. This "fading' of reinforcement is necessary over time for the learner to operate independently.

Finally, remember to use "questioning" as well as lecturing in your feedback strategy. This enables you to evaluate the retention of the learner and determine the effectiveness of the teaching program.

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